coaxial passives & accesories

DKTCOMEGA

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about dktcomega

DKTCOMEGA develops optical and coaxial products for professional broadband operators and solution providers.

The company was founded in 1977. Its headquarters are in Denmark and it has subsidiaries in Sweden, Finland and China. As a dynamic and innovative company, its ambition is to deliver the best and broadest selection of quality products and advice when it comes to optical, coaxial and HFC broadband networks.

With more than thirty years of experience in coaxial broadband networks, DKTCOMEGA offers a comprehensive product portfolio, making it a strong partner for broadband operators. The solid experience gained by DKTCOMEGA is reflected in its products, these being characterized by high quality, top performance and easy installation.

The broad product range covers everything required for access and home networks, thereby satisfying all needs when building and maintaining today's modern broadband networks. As a result, customers turn to DKTCOMEGA for products and advice when it comes to optical, coaxial and HFC broadband networks.

DKTCOMEGA's mission

DKTCOMEGA's mission is to be a strong partner in network products for European broadband operators and solution providers. Based on know-how and natural enthusiasm, good ideas are developed into successful products. This is done with the customer, who furthermore appreciates the broad product range, the attractive quality/price level and the unique customized products. DKTCOMEGA's flexibility and proactive attitude assists in optimizing broadband networks.

For further information please contact DKTCOMEGA at sales@dktcomega.com

DKTCOMEGA

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Specifications are subject to change without notice. DKTCOMEGA is not liable for any misprints or errors.

product introduction

Introduction

The DKTCOMEGA coax product line aims at offering a complete line of products for coaxial and HFC networks. This includes products for local installations, especially where high signal quality must be preserved all the way from the core network to the local installation.

Overview

The product line includes stop filters, low-pass filters, galvanic isolators, filters for data injection (DVU), F-attenuators and equalizers. These products are developed and selected using the same quality criteria as for all other DKTCOMEGA products. Each product is carefully developed or selected to meet the demands for high quality in today's modern broadband networks.

The DVU Series offers versatility when it comes to choose a solution for ensuring a high quality for interactive products, such as Set-Top-Boxes (STBs) and Cable Modems.

DKTCOMEGA Attenuators, Equalizers and terminators are ensuring optimized installation and maintaince, due to a simple design and high quality. The series can be customized upon request.

The DKTCOMEGA Low pass & high pass filters is of high quality combined with our high versatility and flexibility results in a premium series of filters, and excellent choice when making CATV package distribution in broadband networks. The filters can be customized upon request.

The DKTCOMEGA galvanic isolator is used to provide isolation between the network and the consumer infrastructure. To eliminate the risk of damaging the equipment due to variables in local currents.

The LLC Series is used for splitting and combining various frequencies, such a TV and SAT signals, for distribution to outlets with SAT interface.

The various connectors offered by DKTCOMEGA is spanning from providing an easy and fast installation to the very high quality ensuring a low insertion loss.

The LLSS Series consists of both active and passive components, used for sharing a single LNB to multiple recievers.

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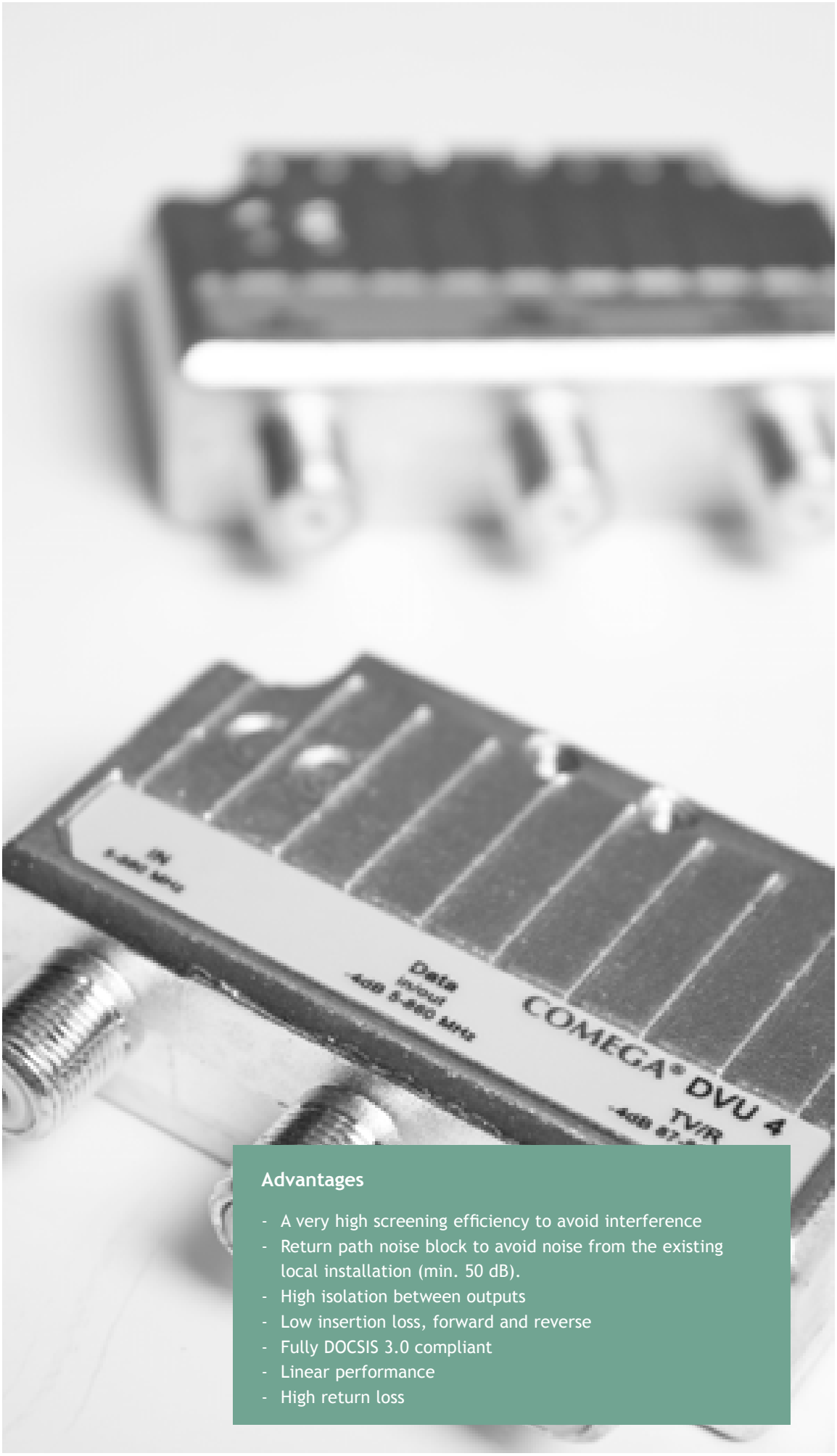


Advantages

- A very high screening efficiency to avoid interference
- Return path noise block to avoid noise from the existing local installation (min. 50 dB).
- High isolation between outputs
- Low insertion loss, forward and reverse
- Fully DOCSIS 3.0 compliant
- Linear performance
- High return loss

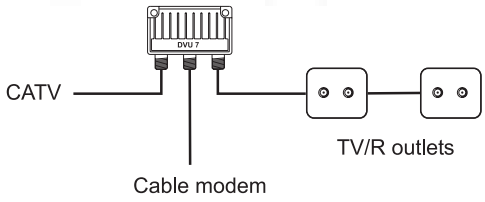
data filters

Product information

DVU products are designed to minimize noise from existing local installations when upgraded for data services. The datafilters are built to comply with CENELEC standards.

DKTCOMEGA DVU 4, DVU 7 are developed to ease the upgrade of local installations for data services with a built-in return path filter minimizing noise coming from the existing installation.

Build to comply with CENELEC standards.



Type	DVU 1-4	DVU 4	DVU 7
Item no.	41138	41134	41135
Version	Diplex	Standard	Standard
Data			
Frequency range forward (MHz)	118 - 1000	5 - 1000	5 - 1000
Frequency range reverse (MHz)	5 - 65	5 - 1000	5 - 1000
Insertion loss forward (dB)	4.0 (± 0.8)	3.5	7
Insertion loss reverse (dB)	0.6 (± 0.6)	3.5	7
Return loss	Cat. B*	Cat. B*	Cat. B*
Isolation Data-TV/R (5-65 MHz) (dB)	> 50	> 65	> 55
Isolation Data-TV/R (88-1000 MHz) (dB)	> 20	> 20	> 18
TV/R			
Frequency range (MHz)	87.5 - 1000	87.5 - 1000	87.5 - 1000
Insertion loss (88-1000 MHz) (dB)	4.0 (± 0.8)	3.5	2
Return loss	Cat. B*	Cat. B*	Cat. B*
General			
Input return loss (5-1000 MHz)	Cat. B*	Cat. B*	Cat. B*
Connectors	F-female	F-female	F-female
Screening effectiveness (5-30 MHz)	> 90 dB	> 90 dB	> 90 dB
Screening effectiveness (30-300 MHz)	> 85 dB	> 85 dB	> 85 dB
Screening effectiveness (300-470 MHz)	> 80 dB	> 80 dB	> 80 dB
Screening effectiveness (470-1000 MHz)	> 75 dB	> 75 dB	> 75 dB
Operating temperature °C	0 - 55	0 - 55	0 - 55
Dimensions (H x W x D mm)	19 x 66.5 x 50	19 x 66.5 x 50	19 x 66.5 x 50

* According to CENELEC EN50083-4; return loss Cat. B: 5-40 MHz ≥ 18 dB
40-1000 MHz ≥ 18 dB ÷ 1.5/oct.

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Advantages

- Strong & robust mechanical construction
- A very high screening efficiency to avoid interference
- Low insertion loss, forward and reverse
- Fully DOCSIS 3.0 compliant
- Linear performance
- High return loss

attenuators & equalizers

Attenuators

The compact DKTCOMEGA attenuators are mechanically very strong manufactured in one piece with a very robust pin construction. The excellent quality ensures linear performance in the CATV frequency band 5-2400 MHz. DKTCOMEGA quality in return loss and screening is also adopted emphasizing the concept of having no weak points in the CATV network.

Type no.:	Item no.:	Attenuation
3dB-F	50803	3dB ± 0.3dB
6dB-F	50806	6dB ± 0.3dB
10dB-F	50810	10dB ± 0.3dB
12dB-F	50812	12dB ± 0.3dB
16dB-F	50816	16dB ±0.3dB
20dB-F	50820	20dB ± 0.3dB

Screening efficiency: 100 dB
Return loss: 5 - 1000 MHz > 20 dB
1000 - 2400 MHz > 15 dB
Category B (EN50083-4)
Dimensions: 30 x 11 (HEX) mm

Equalizers

Designed for signal correction in networks and for having the correct signal window.

Type no.:	Item no.:	Attenuation		
		5 MHz	450 MHz	860 MHz
T5 - 1000C	44106	5.5	2.5	0.8
T10 - 1000C	44111	12.4	4.3	0.9

Return loss: 5-40 MHz - min. 22 dB
40-1000 MHz - min. 22 dB - 1.5dB/oct.
Screening efficiency: Min. 85/75 dB - Class A
No DC Pass
Dimensions: 46 x 12 mm

Returnpath Attenuators

The compact DKTCOMEGA returnpath attenuators are mechanically very strong manufactured in one piece with a very robust pin construction. DKTCOMEGA quality in return loss and screening is also adopted emphasizing the concept of having no weak points in the CATV network.

Type no.:	Item no.:	Attenuation (5-65 MHz)
3 dB-F RPA	50903	3dB ± 0.5dB
6 dB-F RPA	50906	6dB ± 0.5dB
9 dB-F RPA	50909	9dB ± 0.5dB
12 dB-F RPA	50912	12dB ± 0.5dB

Screening efficiency: Class A (EN 50083-2)
Return loss: 85 - 1000 MHz > 16.5 dB - 1.5dB/oct.
As Cat. B (EN50083-4)
Insertion loss: 85 - 100 MHz < 1.5 dB
100 - 1000 MHz < 1 dB
Power Passing: No DC Pass
Dimensions: 33.8 x 11 (HEX) mm

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Advantages

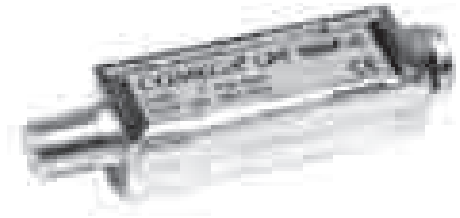
- Strong & robust mechanical construction
- A very high screening efficiency to avoid interference
- Low insertion loss in passband
- High rejection in stopband
- Linear performance in passband
- High return loss
- Many pass/stop combinations

low pass & rps filters

Low pass stopfilter

DKTCOMEGA stopfilter in a new easy-to-mount design with die-cast housing, F-connector, and soldered back plate.

Contact DKTCOMEGA if a special filter is needed.



- High rejection > 50 dB (stop)
- Low insertion loss, typically 1dB (pass)
- High screening efficiency, CENELEC Class A
- High return loss.
- Many different pass/stop combinations

Type	Data	Item no.
LPF 180X	pass 5 - 180 MHz stop 200 - 1000 MHz	43901
LPF 230X	pass 5 - 230 MHz stop 250 - 1000 MHz	43902
LPF 270X	pass 5 - 270 MHz stop 300 - 1000 MHz	43903
LPF 300X	pass 5 - 300 MHz stop 340 - 1000 MHz	43905
LPF 326X	pass 5 - 326 MHz stop 366 - 1000 MHz	43907
LPF 400X	pass 5 - 400 MHz stop 440 - 1000 MHz	43908
LPF 444X	pass 5 - 444 MHz stop 484 - 1000 MHz	43909
LPF 510X	pass 5 - 510 MHz stop 5xx - 1000 MHz	43910
LPF 566X	pass 5 - 510 MHz stop 5xx - 1000 MHz	43911
LPF 585X	pass 5 - 585 MHz stop 625 - 1000 MHz	43912
LPF 597X	pass 5 - 597 MHz stop 637 - 1000 MHz	43914
LPF 606X	pass 5 - 606 MHz stop 646 - 1000 MHz	43916
LPF 672X	pass 5 - 672 MHz stop 707 - 1000 MHz	43918
LPF 710X	pass 5 - 710 MHz stop 750 - 1000 MHz	43920
LPF 750X	pass 5 - 750 MHz stop 790 - 1000 MHz	43922

Returnpath stopfilter

High pass filter - a high quality filter at a comparible low price.

Design and quality have been developed to meet the demands of the installers for a smaller size and easy installation.

- High rejection > 45 dB (stop)
- Low insertion loss, typically 1dB (pass)
- High screening efficiency, CENELEC Class A
- High return loss.
- Other pass/stop combinations available upon request

Type	Data	Item no.
RPS 65	pass 87 - 1000 MHz stop 5 - 65 MHz	51002

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Advantages

- Galvanic isolation according to EN 60728-11
- Strong & robust mechanical construction
- A very high screening efficiency to avoid interference
- Low insertion loss forward & reverse
- Fully DOCSIS 3.0 compliant
- Linear performance
- High return loss

galvanic isolators

Product information

The DKTCOMEGA galvanic isolator provides isolation between the network and the consumer infrastructure without sacrificing performance, as it eliminates balancing currents due to local potential differences on the wire to cause damage of the networking equipment as well as household equipment. At the same time the Gi 2-10R galvanic isolator provides a low insertion loss on the return path data (0.4 dB), enabling an error free data communication. The Gi 2-10R galvanic isolator is suitable for DOCSIS networking infrastructure, is easy to install and is transparent to the network.

The galvanic isolator is based on the unique DKTCOMEGA Master line series with Class A performance

The connectors are all female F-connectors.

Type		Gi 1	Gi 1-8
Item no.:		88006	88005
Version		Pass through	Tap
Data			
Frequency range	MHz	-	5 - 1000
Through-loss	dB	-	8.5 ± 0.5
TV/FM			
Frequency range	MHz	5 - 1000	5 - 1000
Through-loss	dB	0.5 ± 0.5	2,5 ± 0.5

Screening efficiency: 8-470 MHz, 85 dB
470-862 MHz, 75 dB
Breakdown voltage: 2,2 KV for one minute
Isolation resistance: at 500V > 100 M Ω
Return loss: 5-10 MHz, 15 dB
10-40 MHz > 25 dB
40-1000 MHz, 20 dB ÷1,5 dB/oct.

Type		Gi 2-10R
Item no.:		88009
Version		Tap
Insertion loss		
IN-DATA	5-65 MHz	0.4 dB
	88-1000 MHz	10 dB
IN-TV/FM	88-1000 MHz	2.0 dB
Isolation		
IN-TV/FM	5-65 MHz	40 dB
TV/FM-DATA	5-65 MHz	40 dB
Return loss		
IN, DATA	5-65 MHz	18 dB
	88-1000 MHz	18 dB *
TV/FM	88-1000 MHz	16 dB *

Galvanic isolation according to EN60728-11, i.e.
(a) test voltage 2120Vdc, 1 minute, current <0.7mA.
(b) test voltage 230VAC (50Hz or60Hz) leakage current <8mA

Screening immunity according to EN 50083-2, Class A
Return loss:
IN, DATA 5-65 MHz, 18 dB
88-1000 MHz > 18 dB ÷1.5dB/oct, minimum 10dB
TV/FM 88-1000 MHz, 16 dB ÷1.5dB/oct, minimum 10dB

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Advantages

- Strong & robust mechanical construction
- A very high screening efficiency to avoid interference
- Low insertion loss
- High isolation between outputs
- Linear performance
- High return loss

diplex filters

Product information

The DKTCOMEGA LLC range of RF diplexers allow the combining or splitting of frequency bands in RF broadband cabling systems.

The units are available for both 30/45 MHz conventional subsplit systems and for 65/85 MHz Eurosplit systems. There are also versions to combine VHF and UHF bands, TV and FM bands or TV and Satellite-IF bands.

Type	LLC RVU 30	LLC RVU 65	LLC VFU	LLC TS
Item no.	42000	42004	42001	42003
Frequency Port 1	5 - 30 MHz	5 - 65 MHz	5 - 70 / 125 - 900 MHz	40 - 860 MHz
Frequency Port 2	47 - 1000 MHz	85 - 1000 MHz	87.5 - 110 MHz	950 - 2300 MHz
Pass Port 1	< 1 dB	< 1 dB	< 0.3 + DC dB	< 1.2 dB
Pass Port 2	< 1 dB	< 1 dB	< 0.8 dB	< 1.5 dB + DC
Stop Port 1	> 30 dB	> 30 dB	> 20 dB	> 30 dB
Stop Port 2	> 30 dB	> 30 dB	> 20 dB	> 25 dB

Return loss: 5 - 40 MHz > 20 dB
40 - 1000 MHz > 20 dB -1.5 dB/oct.
Screening efficiency: Min. 85/75 dB – Class A

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Advantages

- Strong & robust mechanical construction
- A very high screening efficiency to avoid interference
- High return loss

connectors & terminators

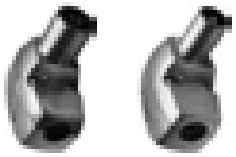
IEC connectors

If the EMC regulations are to be followed it is important to use IEC connectors with high screening efficiency.

Type	IECM-FFVI - IEC Male	IECF-FFVI - IEC Female
Item no.	84031	84030
Return loss	5-1000 MHz, Min 20 dB	5-1000 MHz, Min 20 dB

84030 84031

Type	IEC Male	IEC Female
Item no.	84020	84021
Tolerance	RG59 - RG6 Sized cable	RG59 - RG6 Sized cable



84021 84020

F connectors

If the EMC regulations are to be followed it is important to use F connectors with high screening efficiency.

Type	FMS-C	FMCF	F4SG-C	F4SSG-C	F4CF-C	F2SG-C	F2SSG-C	F2CF-C	DR6
Item no.	80085	80086	80237	80087	80254	80089	80090	80250	80221
Fit on cable	MINI RG59	MINI RG59	RG59	RG59	RG59	RG6	SAT 2S	SAT 2	SAT 2
Connector	F-male	F-male	F-male	F-male	F-male	F-male	F-male	F-male	F-male
Class	Twist-on	Crimp	Twist-on	Twist-on	Crimp	Twist-on	Twist-on	Crimp	Compression

Type	LLFF - F-male - F-male	FVI - F-male - F-male
Item no.	80704	80750
Class	Straight	Angled

80704 80750

F-Terminator

Used for terminating any unused ports throughout the network.

Type	Return loss	Item no.
75F	30 dB	80810

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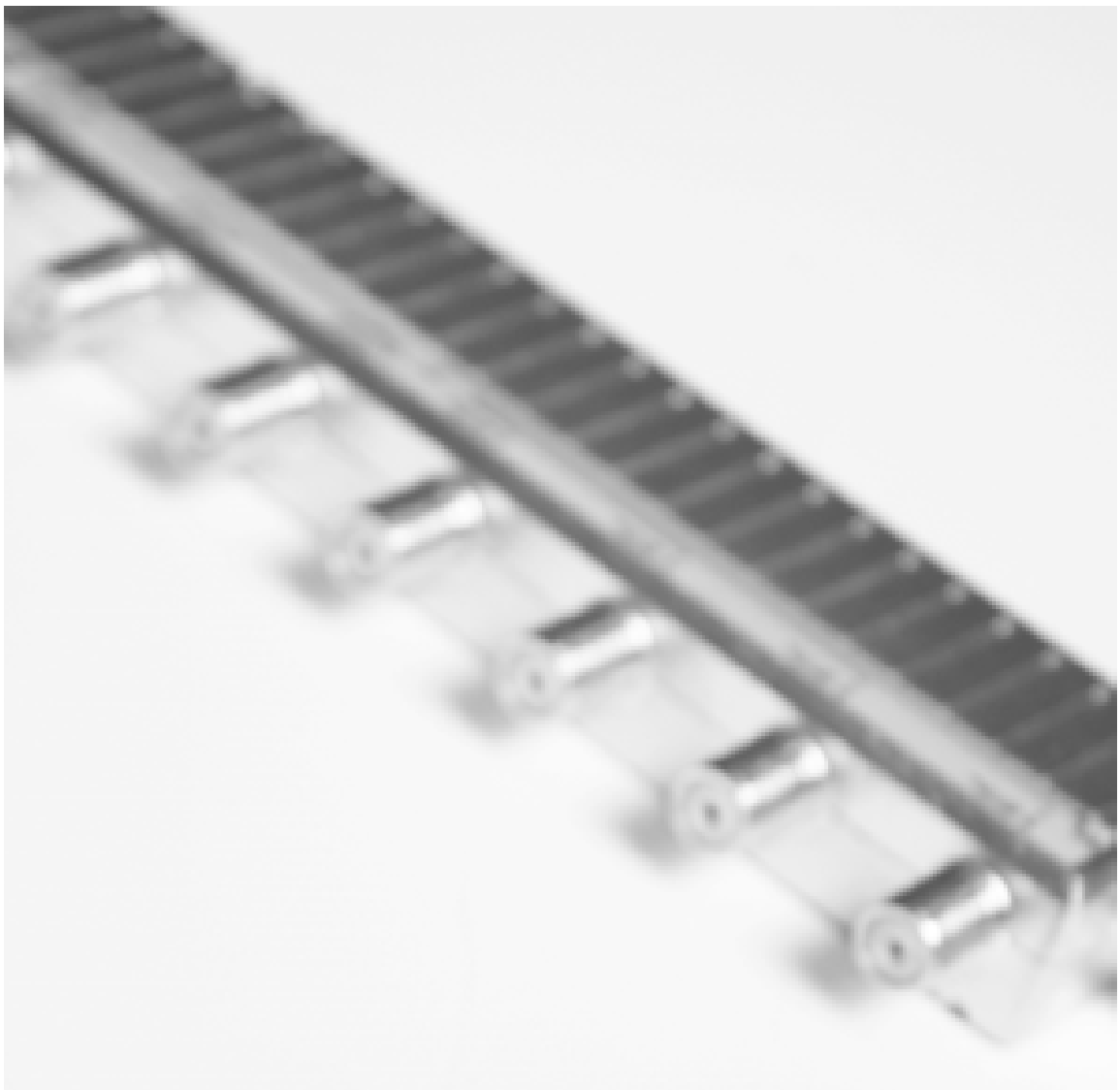
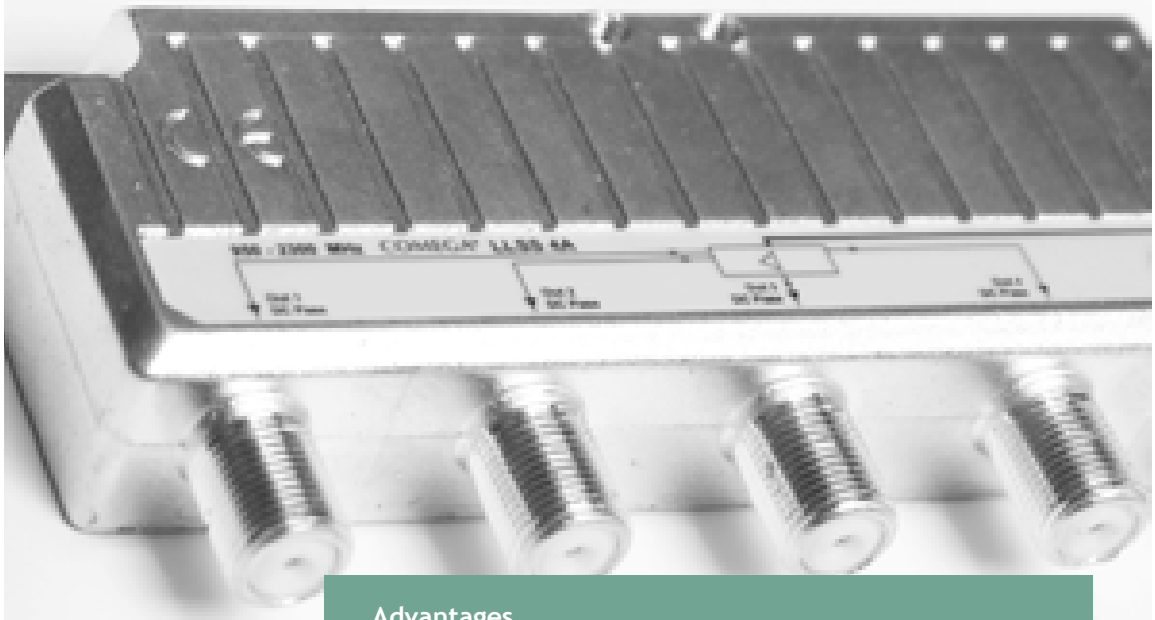




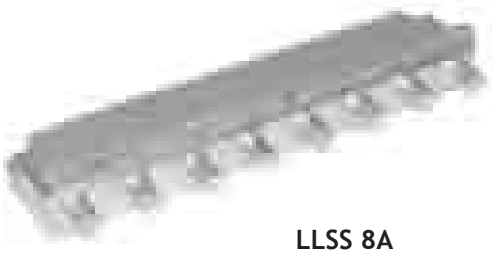
Advantages

- Strong & robust mechanical construction
- A very high screening efficiency to avoid interference
- High isolation between outputs
- Linear performance

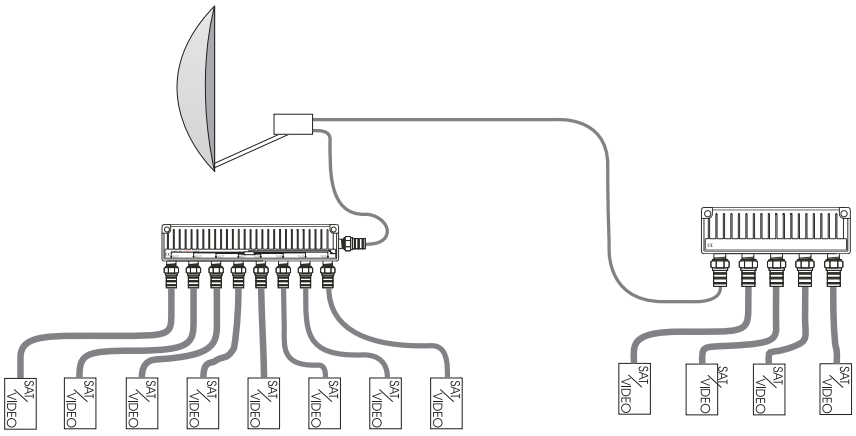
sat splitter, active & passive

Product information

These sat splitters provides a professionel solution for headend applications; for example to overcome loss between one shared LNB and more digital receivers



LLSS 8A



Type		LLSS 2-1*	LLSS 4A**	LLSS 8A**
Item no.		41341	41345	41347
Frequency	MHz	900 - 2400	900 - 2400	900 - 2400
Attenuation	dB	4.8	-	-
Gain	dB	-	2	1
Output level*	dBµV	-	max. 85	max. 85
Noise Figure	dB	-	max. 7	max. 7
Function		Passive	Active	Active

* Power pass on 1 or 2 outputs 0.6A 24V

** CTB/CSO < 60 dB with 42-channel CENELEC.
Return loss: Typ 10 dB - Isolation typ 30 dB
Voltage: 12-18V DC/40mA

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Advantages

- Ease the mounting of connectors
- Ensures correct mounting of connectors
- Ensures correct pressure when tightening connectors

tools

Cable strip tool

Cable strippers are used to ease the mounting of connectors on coaxial cables.

Cable type	Type no.	Item no.	Description
MINI RG59	FC02	91050	Scissors
RG59	CS-UNI	91055	Cable stripper
RG6	CS-UNI	91055	Cable stripper
RG11	CS17	91056	Cable stripper
22/99	CS22	91057	Cable stripper
27/115	CS27	91058	Cable stripper
34/145	CS34	91059	Cable stripper

Compression & Crimp tools

Tools used for mounting connectors on cables

Connector	Type no.	Item no.	Description
FMCF	CT-C	91000	Crimp tool
F4CF-C			
F2CF-C			
07/48	CT-M	91001	Crimp tool
11/50			
17/73			
DR6	VT-160	91043	Compression tool

Various Tools

Various tools, includes a Torque Wrench that ensures the right pressure is used when mounting F-male connectors on the F-female ones. The Tool-key is used when you secury your network against illegal subsribers.

Type no.	Item no.	Description
5530-TW	91090	Torque Wrench
FLV75	91030	Tool-key for F “lock”